

Table 8-3. BCM upstream summary table – study specific

COC	Study-specific Data									
	Ecology Centrifuged Solids	King County Filtered Solids	King County Sediment Traps ^a	USGS Centrifuged Solids	Ecology Upstream Bedded Sediment	USGS Bedded Sediment	USACE Turning Basin Cores			
	2008–2009	2013–2015	2013–2015	2013–2017	2008	2013–2015	2008	2009	2011	2017
	All Conditions	Baseflow, Storm, Dam ^b	Baffle, Jar	Baseflow, Storm, Dam ^b	RM 5–RM 7 and >30% fines	RM 10 and < 62.5 µm	RM 4.3 - RM 4.75			
PCBs ^{c,e} (µg/kg)	n = 7	n = 3, 5, 4	n = 5, 4	n = 10, 17, 10	n = 30	n = 7	n = 2	n = 2	n = 8	n = 5
	8 (median)	7, 59, 5 (median)	1, 9 (median)	8, 18, 2 (median)	2 (median)	6 (median)	39 (median)	14 (median)	10 (median)	50 (median)
	15 (mean)	8, 49, 6 (mean)	5, 13 (mean)	8, 25, 3 (mean)	5 (mean)	6 (mean)	39 (mean)	14 (mean)	11 (mean)	50 (mean)
	67 (95UCL ^d)	66 (95UCL ^d)	15 (95UCL ^d)	24 (95UCL ^d)	10 (95UCL ^d)	9 (95UCL ^d)	41 (95UCL ^d 2008 - 2017); 43 (95UCL ^d 2011, 2017)			
cPAH TEQ ^{c,f} (µg/kg)	n = 7	n = 2, 3, 4	n = 4, 4	n = 5, 17, 10	n = 31	n = 7	n = 2	n = 2	n = 9	n = 5
	53 (median)	36, 350, 39 (median)	35, 45 (median)	33, 141, 14 (median)	16 (median)	18 (median)	75 (median)	17 (median)	20 (median)	28 (median)
	138 (mean)	36, 315, 44 (mean)	45, 54 (mean)	53, 156, 28 (mean)	37 (mean)	23 (mean)	75 (mean)	17 (mean)	25 (mean)	27 (mean)
	640 (95UCL ^d)	415 (95UCL ^d)	80 (95UCL ^d)	157 (95UCL ^d)	72 (95UCL ^d)	31 (95UCL ^d)	40 (95UCL ^d 2008 - 2017); 30 (95UCL ^c 2011, 2017)			
Dioxin/furan TEQ ^{c,f} (ng/kg)	n = 6	n = 3, 3, 4	n = 3, 2	n = 11, 17, 10	n = 31	n = 7	n = 2		n = 5	n = 5
	3 (median)	3, 8, 3 (median)	1, 3 (median)	3, 9, 1 (median)	2 (median)	3 (median)	3 (median)	no data	1 (median)	3 (median)
	6 (mean)	3, 12, 4 (mean)	2, 3 (mean)	4, 10, 2 (mean)	2 (mean)	3 (mean)	3 (mean)		1 (mean)	3 (mean)
	10 (95UCL ^d)	11 (95UCL ^d)	5 (95UCL ^d)	9 (95UCL ^d)	2 (95UCL ^d)	4 (95UCL ^d)	3 (95UCL ^d 2008 - 2017); 3 (95UCL ^d 2011, 2017)			
Arsenic ^c (mg/kg)	n = 7	n = 3, 3, 4	n = 5, 2	n = 8, 17, 10	n = 31	n = 7	n = 2	n = 2	n = 9	n = 5
	14 (median)	37, 17, 11 (median)	5, 13 (median)	21, 15, 10 (median)	9 (median)	10 (median)	12 (median)	5 (median)	10 (median)	13 (median)
	17 (mean)	40, 19 11 (mean)	9, 13 (mean)	20, 18, 10 (mean)	9 (mean)	10 (mean)	12 (mean)	5 (mean)	9 (mean)	11 (mean)
	22 (95UCL ^d)	30 (95UCL ^d)	20 (95UCL ^d)	20 (95UCL ^d)	10 (95UCL ^d)	11 (95UCL ^d)	11 (95UCL ^d 2008 - 2017); 11 (95UCL ^d 2011, 2017)			

^a The traps were deployed for three-month intervals, within summer, fall, and winter seasons.

^b King County and USGS suspended solids data (i.e., centrifuged or filtered solids) include baseflow and storm events with and without significant dam releases (qualified as > 2,000 cfs at USGS gage below Howard Hanson Dam), indicated as “Storm” and “Dam,” respectively.

^c If the sample result was non-detected, then ½ DL was used to calculate the summary statistics presented in this table.

^d The sample sizes were too small to estimate a 95UCL for many of the subsets within each study (e.g., baseflow, storm, baffle, or jar), so a single 95UCL is reported for the combined values from each study.

^e PCBs were calculated as the sum of detected congeners when available; otherwise, PCBs were calculated as the sum of detected Aroclors.

^f cPAH and dioxin/furan TEQs were calculated using ½ DL for non-detected results.

95UCL – 95% upper confidence limit (on the mean)
BCM – bed composition model
cfs – cubic feet per second
COC – contaminant of concern
cPAH – carcinogenic polycyclic aromatic hydrocarbon

DL – detection limit
Ecology – Washington State Department of Ecology
MDL – method detection limit
PCB – polychlorinated biphenyl

RL – reporting limit
RM – river mile
TEQ – toxic equivalent
USGS – US Geological Survey